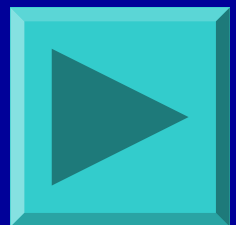# Control Center Training
March 21, 2006

O.G. McClinton, Jr.

Pipeline Safety Institute, LLC

11100 Stratford Dr. (Suite A300)

Oklahoma City, OK 73120

Phone (405) 927-0627

Fax (405) 927-0637

Cell (405) 314-9689

Email: ogmcclinton@sbcglobal.net

Course Outline

- Section 1 – Introduction and Regulatory Requirements
- Section 2 - Control Center Overview
- Section 3 - Candidate Pre-screen and Selection Process
- Section 4 - A Training Process
- Section 5 - Basic Fundamentals
- Section 6 - Job Specific Training
- Section 7 - Re-qualification
- Section 8 -"What If" and Simulator

Section 1
Introduction

Objectives

- When you complete this training program you should understand:
  - The training and procedures regulatory requirements
  - The different levels of training and procedures utilized within a pipeline control center and how they are used to improve the quality and safety of the operations of the pipeline system

Goals

- Ensure a qualified control center workforce

- Reduce the risk of accidents on pipeline facilities attributable to human error

- Provide an additional level of safety

- Ensure individuals are capable of recognizing and reacting to abnormal operating conditions

Regulatory Requirements

- Training and Qualification:
  - 192.800 and 195.500, require that by October 28, 2002, all personnel performing covered tasks on a pipeline facility be evaluated and qualified and be able to properly react and respond to abnormal operating conditions.
  - After October 27, 2002, CFR 195.403 was changed from requiring training for all pipeline operations to requiring training for emergency response personnel only.

Regulatory Requirements

- Training and Qualification
  - Pipeline Safety Improvement Act of 2002 requires that by December 17, 2004 an operators qualification plan must include "a program to provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities".

Regulatory Requirements

- Procedural manuals:
  - 195.402 Requires that each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies
  - Manual must be reviewed at intervals not to exceed 15 months but at least once each calendar year

Section 2
Control Center Overview

Console and Digital Image by

Control Center Overview

- Control Center Functions:
    - Provide leak prevention and detection
    - Monitor operating conditions
    - Monitor and control flow and pressure
    - Assure shipment and delivery of products are on time and on schedule
    - Perform remote deliveries using discreet commands
    - Preset commands for automated deliveries
    - Monitor operations of machinery

Section 3:
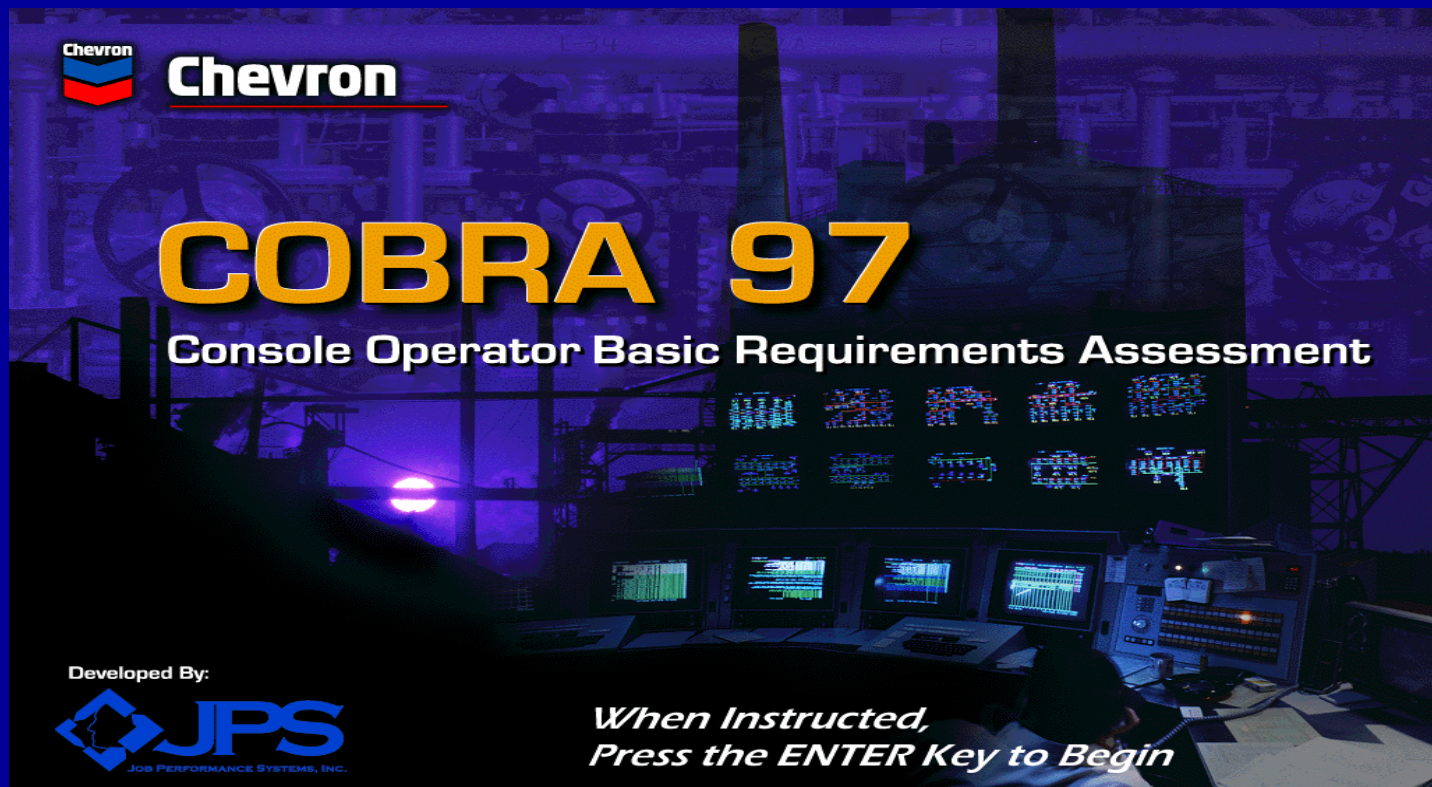# Candidate Pre-screen and Selection

Prescreen and Selection

- Proper selection is key to the training process. Assessment of an applicants competencies and abilities prior to being considered a candidate for hire is critical to the individuals success.

Candidate Pre-screen

- COBRA (Console Operator Basic Requirements Assessment)

Competencies

- Selective Attention
- Problem Sensitivity
- Time Sharing
- Deductive Reasoning
- Oral Expression
- Oral Comprehension

- Resistance to Premature Judgment
- Speech Recognition
- Response Orientation
- Visualization
- Speed of Closure

Competencies

- Selective Attention - ability to focus on a task in the face of distractions or in the face of too little stimuli

- Problem Sensitivity - ability to determine when something goes wrong or likely to go wrong

- Time Sharing - ability to shift one's attention back and forth among two or more events or sources of information

Competencies

- Deductive Reasoning - ability to logically "figure out" the cause of a problem and determine if an answer makes sense
- Oral Expression - ability to speak so that others will understand
- Oral Comprehension - ability to understand spoken communications

Competencies

- Resistance to Premature Judgment - ability to withhold making a decision until the facts are obtained and evaluated

- Speech Recognition - ability to hear and understand the communications of others

- Response Orientation - ability to choose between two or more movements quickly and accurately when two or more different signals are given

Competencies

- Visualization - ability to imagine how something will look if it is moved or rearranged

- Speed of Closure - ability to quickly make sense out of information that may at first seem to be without meaning

Candidate Selection

- Targeted Selection Process:
  - Review individuals Past Experience
  - Interview using group process
  - Team analyzes results

Section 4
A Training Process

Control Center
Associate Controller Training Process

Week 1

Trainee must complete fundamental modules 1 - 8

Scheduling, Inventory, and Quality Assurance Training

To Be Completed Within the First 3 Months of Training

Simulator Testing

- 3 NOP's
- 4 AOP's
- 1 EOP's

Must be completed within first 6 months of Training

START

640 Hours (4 Months)

320 Hours (2 Months)
Total Hours 960

DESK QUALIFIED

Week 2

Assign To Desk

Month 1
Required General Field Trip

Month 2
Required General Field Trip

Month 3
Required General Field Trip

Months 4, 5 and 6
Job Specific Field Trips When Possible

Successfully complete all 100 Fundamental Modules within 640 hours

Comprehensive Fundamentals Assessment and Associate Controller Audit

Successfully complete Desk Specific Modules, Procedures and Abnormal Operating Conditions within 320 hours

Desk Specific OQ Assessment and Associate Controller Audit

Trainee Review Process:
Trainer - Daily
Senior Controller - Every 5th Day
Training Coordinator - Monthly

Trainee Review Process:
Trainer - Daily
Senior Controller - Every 5th Day
Training Coordinator - Monthly

Section 5
Basic Fundamentals

Basic Fundamentals

- Require new controllers to complete and pass 101 fundamental modules outlining the basic fundamentals of operating a pipeline (i.e. valves and manifolds, pumps and motors, pipeline repairs)

- Successfully pass a comprehensive assessment within first four months of hire on critical fundamental modules (i.e. safety, hydraulics, alarm responses)

Job Specific Training

- Prescriptive training process
- Specific training goals and objectives
- Goals designed to be knowledge and task based
- Evaluate and assess an individuals ability to perform all operational and abnormal operating condition tasks
- Formal documentation and feedback process
- Required use of simulator and "what if" training

Qualification Covered Tasks

- Start-Up of A Pipeline
- Shutdown of A Pipeline
- Monitor Pressures, Flows, Communications and Line Integrity and maintain them Within Allowable Limits
- Manually Or Remotely Open Or Close Valves Or Other Equipment
- React and Respond to Abnormal Operating Conditions

Section 6
Re-qualification

Re-qualification

- Annual simulator training
- Completion of required readings
- Temporary instructions
- Maximum critical event training
- Controller audits (conduct of operations)
- Knowledge assessment

What you should look for

- Are operating procedures available?
- Does the operating procedures reflect how the pipeline is operated?
- Has the procedure been changed recently?
- Have changes to the procedures been communicated to the Controllers?
- Have the Controllers been properly instructed on the operating procedures?
- Are there records documenting individuals training?
- Are there records documenting the qualification of the Controllers?

Thank You

Questions and Answers